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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/790,046

Applicant(s)

CHOI, MI AE

Examiner

JAMES R. MARANDI

Art Unit

2421

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application, on 7/24/09, after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/25/09 has been entered.

Response to Amendment

2. This action is in response to amendment filed on 6/25/09. Claims 17-56 are presently pending. Claims 35- 56 have been newly added. Claims 1-16 have been cancelled.

Response to Arguments

3. Applicant's arguments filed 6/25/2009 have been fully considered but they are not persuasive.

3.1. Applicant argues that "***Newell does not cure the deficiencies of Hamilton.***

Specifically, Newell does not disclose or suggest Applicant's claimed advertising image or advertising image path. Indeed, neither the words advertising nor image, nor synonyms thereof, are mentioned in Newell". Page 17 of Remarks, last Paragraph

As presented in office action of 1/6/2009, Hamilton discloses "an apparatus and a method for inserting and displaying one or more signals during processing and display delays encountered in digital STB receivers, including those delays encountered during channel changes. These signals can be advertisements, entertainment, or other messages." See Abstract.

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (§ [14]), comprises static images, dynamic applets, animation, and **advertisements** (§§ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (§ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing a "path" to the advertisement ("image path").

Through examiner agrees that the words "advertising" or "image" do not appear in Newell, applicant is reminded that Newell discloses ATSC data broadcasting specification. As reflected in Newell's Abstract (1st page), ATSC specifies the use of MPEG-2 for the packetization and **multiplexing** of compressed audio/video and data **signals**. Newell further provides examples of such broadcast services to include enhanced television, hotspots, HTML, and magazines, any of which are notoriously well known to include **images/ advertisements**. Therefore, Newell discloses inserting/ multiplexing data (image/ advertisement) signals within the stream of programming (audio/ video) signals. (Also see basic goals of ATSC data broadcasting, 2nd page, 1st Col., 2nd paragraph).

Examiner further relies on Newell's disclosure on how a path to the appropriate data broadcast is described via Associated Tag Descriptors (ATDs), as shown in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. As demonstrated by Newell the MPEG-2 transport streams are monitored for PIDs, from which SDT, NRT, and PMTs are extracted, tapped, and matched in order to separate programs, broadcast data (advertisements or other applications) and interactive data (advertisements, games, other applications). Taps are pointers to the data. For example, a URL/Internet address points to a server containing a file (when the file is an advertisement, this specifies a path to the advertisement, therefore, "**an advertisement image path**") which is then extracted / received by the receiver.

Examiner presents that the use of taps (association tags/ internet addresses/ file locations/ paths) were notoriously well known at the time of invention, as demonstrated by Newell et al., "Overview of The ATSC Data Broadcast Service Specification Version 1.0", Sharp/ Intel Presentation, May 6, 1999 (hereinafter "Newell'99"). (See slide 19).

Within ATSC standards (ATSC reference was provided in the Office Action of 2/14/2008) , pages 32-33, table 15.6, show the syntax for the Service Data Table (SDT) Byte Structure (also shown in applicant's disclosure, Fig. 2, with addition of

description to "service_private_data_byte"). The "service_private_data_byte" is reserved for recovering/indicating Network addresses such as Network Resource Tables (NRTs, including network addresses, URLs, etc., also shown in Fig. 12.1).

Also, L. Aztori et al. {"Private Data Broadcasting Using Digital TV and MPEG-2 Transport Stream", IEE, IPA'97, July 1997, PP 453-457 (herein after "Aztori")}
further provides an example of a system for transmission of multimedia information within the digital TV channel, using a file system where file paths and names are specified and utilized, as shown in Table II, page 455, 2nd column, 2nd paragraph.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton (inserting one or more signals including advertisements) with Newell's invention (locating said signals/ advertisements/ files through a file system/path to image file) in order to provide flexibility for locating files/applications anywhere in the network.

3.2. Applicant further argues that “... *in Newell, the application connects to a web server via the NRT to receive a particular file, not via an advertisement image path. Indeed, the data in the NRT is not an advertisement image path.*” Page 18 of Remarks, 1st Paragraph

Examiner disagrees. As explained in 3.1 above, within the Service description Framework, disclosed by Newell, the file paths (whether from another stream, or a path to a specific server) are communicated via PMT, NRT, and SDTs to establish logical connections (dotted lines in Fig. 3) so the application layer connectivity (through bold lines) may be accomplished. The file (signal) was taught by Hamilton to comprise static images, dynamic applets, animation, and advertisements (Hamilton: ¶¶ [16] - [19]), as indicated in the U.S.C § 103 analysis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 17- 36, 38- 42, 44- 47, 49- 53, 55, and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over J.S. Hamilton. USPGPUB 2002/0087973 (hereinafter "Hamilton") in view of Newell et al., "The ATSC Data Broadcasting Specification", Stanford University course CS 448-a material for Winter 2000 (hereinafter "Newell").

5.1. Regarding claim 17 Hamilton discloses **a method of operating a data broadcasting system that executes a data broadcast under a client-server environment** (a digital TV network using MPEG transport streams, as in Fig. 1A, with client STB and headend/ server transmitting/ serving information), **the method comprising the steps of:**

performing the following sequence of steps on the client device while the individual data sections are being downloaded and extracted (Hamilton inserts a signal to entertain the viewer while extracting/ downloading the program the viewer is tuning to –channel was changed to- ¶ [13]) ;

extracting advertising-image related data (advertising is extracted from the local drive, or streamed through MPEG transport stream ¶ [15].), **the advertising-image related data** is extracted locally, from transport stream, or internet.

downloading an advertisement image from the local drive, transport stream, or internet ¶ [15]; and

displaying the downloaded advertisement image (¶ [15]);

cancelling the step of displaying the advertisement image after all data sections of the specific application are downloaded and extracted by the client device; ¶ [14], where the signal (advertisement) is terminated as soon as the new program (channel) is available ; and

executing the specific application on the client device (the tuned program is displayed/ the desired application executed).

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (¶ [14]), comprises static images, dynamic applets, animation, and advertisements (¶¶ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (¶ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing a "path" to the advertisement ("**an advertisement image path**" for locating and downloading of such advertisement **from the server** and does not detail:

downloading at a client device a data service table (DST) relating to a specific application;

extracting information relating to the specific application from the DST on the client device;

downloading at the client device and from a server, individual data sections of the specific application based upon the extracted information;

extracting data from the downloaded individual data sections on the client device;

However, Newell, in analogous art, discloses:

downloading at a client device a data service table (DST or as defined by ATSC and Newell Service Description Table, SDT) **relating to a specific application** (MPEG-2 transport is received at client device, e.g. STB. The SDT is extracted from PIDs of the transport stream, 5th page, 1st Col., items 2 and 3;

Fig. 3, PIDx within MPEG-2 transport stream, see the NRT, PID, SDT connections);

extracting information relating to the specific application from the DST on the client device (information from SDTs are extracted through Taps, 5th page, 1st Col., items 2 and 3);

downloading at the client device and from a server, individual data sections of the specific application based upon the extracted information (5th page, 1st Col., items 2 and 3);

extracting data from the downloaded individual data sections on the client device; (as described in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. The NRT specifies network connections, designated in SDT, see dashed lines in Fig. 3, and as such specify the logical address/ **file system path** of the files/objects for locating and extracting the files, such as advertising image, or gaming applications, etc.).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton, with Newell's teachings in order to provide flexibility for locating files/applications anywhere in the network while providing access to various local and remote applications.

5.1.1. Regarding claim 18 the system of Hamilton and Newell discloses
wherein:

The step of downloading and advertisement image based on the advertisement image path comprises **downloading multiple advertisement images** based on the advertisement image path, **and**

The step of displaying the downloaded advertisement image comprises extracting and **composing a composite advertisement image from the multiple advertisement images.** (In ¶¶ [16], [18], and [19], Hamilton discloses creating, correlating, linking multiple ads together.)

5.1.2. Regarding claim 19 the system of Hamilton and Newell discloses wherein the step of displaying the downloaded advertisement image comprises:

displaying one of a still image and a moving image (Hamilton's advertisement/signal comprises static images, dynamic applets, animation, and etc. ¶¶ [16] - [19]).

5.1.3. Regarding claim 20, the system of Hamilton and Newell discloses:

Displaying a video broadcast on a full screen of the client device, Hamilton presents the video broadcast on the full screen and replaces it with the advertisement, for duration of the advertisement, in full screen mode.

The system of Hamilton and Newell is silent on **displaying the downloaded advertisement image over the video broadcast on a predetermined subset of the screen of the client device.**

However, official notice is taken that displaying multiple inputs on a screen, e.g. PIP, is a notoriously well known feature of video display devices. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton and Newell to include multiple display area (windows) each with a program/ advertisement in order to maximize the number of information / entertainment feed presentations to the viewer.

5.1.4. Regarding claim 21, the system of Hamilton and Newell discloses:

Displaying one of an audio broadcast and a data broadcast on a screen of the client device (Hamilton's advertisement/signal comprises static images, dynamic applets, animation, etc. . . Furthermore the MPEG-2 stream contains video, audio and data. ¶¶ [14] - [19]), **wherein the step of displaying the downloaded advertisement image comprises:**

displaying the downloaded advertisement image on a full portion of the screen of the client device, Hamilton's advertisement/signal becomes the only input to the display device therefore it has full coverage of the screen.

5.1.5. Regarding claim 22, the system of Hamilton and Newell discloses

wherein the step of downloading at the client device a data service table (DST) is initiated by one of:

turning on power to the client device; and

changing a channel at the client device, as disclosed by Hamilton

changing channels causes delay in acquiring/ tuning to programming data from a new channel, this is similar to turning the TV on, as the TV begins to tune to/ acquire the channel it was set on. Therefore both these triggers cause similar presentation of advertisement while the desired program is tuned to ([12] and [14]).

5.2. Regarding claim 23 Hamilton discloses **a data broadcasting system of executing a data broadcast under a client-server environment (Fig. 1A), comprising:**

a network (a digital TV network using MPEG transport streams);

a server (headend/ server transmitting/ serving information); and

a client device (STB) connected to the server via the network,

wherein the client device is configured to:

perform the following sequence of functions while the individual data sections are being downloaded and extracted (Hamilton inserts a signal to entertain the viewer while extracting/ downloading the program the viewer is tuning to –channel was changed to- ¶[13]) ;

extract advertising-image related data (advertising is extracted from the local drive, or streamed through MPEG transport stream ¶ [15].), **the advertising-image related data** is extracted from a local drive, transport stream, or internet.

download an advertisement image from the local drive, transport stream, or internet; **and**

display the advertisement image (¶ [15]);

cancel the step of displaying the advertisement image after all data sections of the specific application are downloaded and extracted; ¶ [14], where the signal (advertisement) is terminated as soon as the new program (channel) is available ; **and**

execute the specific application (the tuned program is displayed/ the desired application executed).

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (¶ [14]), comprises static images, dynamic applets, animation, and **advertisements** (¶¶ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (¶ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing a "path" to the advertisement ("**an advertisement image path**" for locating and downloading of such advertisement **from the server** and does not detail client device configured to:

download, from the server, a data service table (DST) relating to a specific application;

extract information relating to the specific application from the DST;

download, from the server, individual data sections of the specific application based upon the extracted information;

extract data from the downloaded individual data sections;

However, Newell, in analogous art, discloses a client device configured to:

download, from the server, a data service table (DST or as defined by ATSC and Newell Service Description Table, SDT) relating to a specific application (MPEG-2 transport is received at client device, e.g. STB. The SDT is extracted from PIDs of the transport stream, 5th page, 1st Col., items 2 and 3; Fig. 3, PIDx within MPEG-2 transport stream, see the NRT, PID, SDT connections);

extract information relating to the specific application from the DST on the client device (information from SDTs are extracted through Taps, 5th page, 1st Col., items 2 and 3);

download, from the server, individual data sections of the specific application based upon the extracted information (5th page, 1st Col., items 2 and 3);

extract data from the downloaded individual data sections; (as described in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. The NRT specifies network connections, designated in SDT, see dashed lines in Fig. 3, and as such specify the logical address/ **file system path** of the files/objects for locating and extracting the files, such as advertising image, or gaming applications, etc.).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton, with Newell's teachings in order to provide flexibility for locating files/applications anywhere in the network while providing access to various local and remote applications.

5.2.1. Regarding claim 24, the system of Hamilton and Newell discloses
wherein the client device is configured to:

download multiple advertisement images from the advertisement image path, and

extract and compose a composite advertisement image from the multiple advertisement images as the advertisement image. (In ¶¶ [16], [18], and [19], Hamilton discloses creating, correlating, linking multiple ads together.)

5.2.2. Regarding claim 25, the system of Hamilton and Newell discloses

wherein the client device is configured to display one of a still image and a moving image as the advertisement image (Hamilton's advertisement/signal comprises static images, dynamic applets, animation, and etc.; ¶¶ [16] - [19]).

5.2.3. Regarding claim 26, the system of Hamilton and Newell discloses

wherein the client device is configured to:

display a video broadcast on a full screen of the client device,
Hamilton presents the video broadcast on the full screen and replaces it with the advertisement, for duration of the advertisement, in full screen mode.

The system of Hamilton and Newell is silent on **displaying the downloaded advertisement image over the video broadcast on a predetermined subset of the screen of the client device.**

However, official notice is taken that displaying multiple inputs on a screen, e.g. PIP, is a notoriously well known feature of video display devices. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton and Newell to include multiple display area (windows) each with a program/ advertisement in order to maximize the number of information / entertainment feed presentations to the viewer.

5.2.4. Regarding claim 27, the system of Hamilton and Newell discloses

wherein the client device is configured to:

display one of an audio broadcast and a data broadcast on a screen of the client device (Hamilton's advertisement/signal comprises static images, dynamic applets, animation, etc. . Furthermore the MPEG-2 stream contains video, audio and data. ¶¶ [14] - [19]), **and**

display the downloaded advertisement image on a full portion of the screen of the client device, Hamilton's advertisement/signal becomes the only input to the display device therefore it has full coverage of the screen.

5.2.5. Regarding claim 28, the system of Hamilton and Newell discloses

wherein the client device is configured to initiate a data service table (DST) downloaded in response to one of:

turning on power to the client device; and

changing a channel at the client device, as disclosed by Hamilton

changing channels causes delay in acquiring/ tuning to programming data from a new channel, this is similar to turning the TV on, as the TV begins to tune to/ acquire the channel it was set on. Therefore both these triggers cause similar presentation of advertisement while the desired program is tuned to ([12] and [14]).

5.3. Regarding claim 29 Hamilton discloses **a client device (STB) in a data**

broadcasting system of executing a data broadcast under a client-server environment (Fig. 1A), the data broadcasting system including a network (a digital TV network using MPEG transport streams) and a server (headend/ server transmitting/ serving information) connected to the client via the network (as in Fig. 1A), the client device being configured to:

perform the following sequence of functions while the individual data sections are being downloaded and extracted (Hamilton inserts a signal to

entertain the viewer while extracting/ downloading the program the viewer is tuning to –channel was changed to- ¶[13]) ;

extract advertising-image related data (advertising is extracted from the local drive, or streamed through MPEG transport stream ¶ [15].), **the advertising-image related data** is extracted from a local drive, transport stream, or internet.

download an advertisement image from the local drive, transport stream, or internet; **and**

display the advertisement image (¶ [15]);

cancel the step of displaying the advertisement image after all data sections of the specific application are downloaded and extracted; ¶ [14], where the signal (advertisement) is terminated as soon as the new program (channel) is available ; **and**

execute the specific application (the tuned program is displayed/ the desired application executed).

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (¶ [14]), comprises static images, dynamic applets, animation, and **advertisements** (¶¶ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (¶ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing a "path" to the advertisement ("**an advertisement image path**") for locating and downloading of such advertisement **from the server** and does not detail client device configured to:

download, at the client device and from the server, a data service table (DST) relating to a specific application;
extract information relating to the specific application from the DST;
download, from the server, individual data sections of the specific application based upon the extracted information;
extract data from the downloaded individual data sections;

However, Newell, in analogous art, discloses a client device configured to:

download, at the client device and from the server, a data service table (DST or as defined by ATSC and Newell Service Description Table, SDT) relating to a specific application (MPEG-2 transport is received at client device, e.g. STB. The SDT is extracted from PIDs of the transport stream, 5th page, 1st Col., items 2 and 3; Fig. 3, PIDx within MPEG-2 transport stream, see the NRT, PID, SDT connections);

extract information relating to the specific application from the DST on the client device (information from SDTs are extracted through Taps, 5th page, 1st Col., items 2 and 3);

download, from the server, individual data sections of the specific application based upon the extracted information (5th page, 1st Col., items 2 and 3);

extract data from the downloaded individual data sections; (as described in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. The NRT specifies network connections, designated in SDT, see dashed lines in Fig. 3, and as such specify the logical address/ **file system path** of the files/objects for locating and extracting the files, such as advertising image, or gaming applications, etc.).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton, with Newell's teachings in order to provide flexibility for locating files/applications anywhere in the network while providing access to various local and remote applications.

5.3.1. Regarding claim 30, the system of Hamilton and Newell discloses

wherein the client device further configured to:

download multiple advertisement images from the advertisement image path, **and**

extract and compose a composite advertisement image from the multiple advertisement images as the advertisement image. (In ¶¶ [16], [18], and [19], Hamilton discloses creating, correlating, linking multiple ads together.)

5.3.2. Regarding claim 31, the system of Hamilton and Newell discloses **the client device further configured to display one of a still image and a**

moving image as the advertisement image (Hamilton's

advertisement/signal comprises static images, dynamic applets, animation, and etc.; ¶¶ [16] - [19])

5.3.3. Regarding claim 32, the system of Hamilton and Newell discloses **the**

client device further configured to:

display a video broadcast on a full screen of the client device,

Hamilton presents the video broadcast on the full screen and replaces it with the advertisement, for duration of the advertisement, in full screen mode.

The system of Hamilton and Newell is silent on **displaying the downloaded advertisement image over the video broadcast on a predetermined subset of the screen of the client device.**

However, official notice is taken that displaying multiple inputs on a screen, e.g. PIP, is a notoriously well known feature of video display devices. Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton and Newell to include multiple display area (windows) each with a program/ advertisement in order to maximize the number of information / entertainment feed presentations to the viewer.

5.3.4. Regarding claim 33, the system of Hamilton and Newell discloses **the client device further configured to:**

display one of an audio broadcast and a data broadcast on a screen of the client device (Hamilton's advertisement/signal comprises static images, dynamic applets, animation, etc. . Furthermore the MPEG-2 stream contains video, audio and data. ¶¶ [14] - [19]), **and**

display the downloaded advertisement image on a full portion of the screen of the client device, Hamilton's advertisement/signal becomes the only input to the display device therefore it has full coverage of the screen.

5.3.5. Regarding claim 34, the system of Hamilton and Newell discloses the client device further configured to initiate a data service table (DST) downloaded in response to one of:

turning on power to the client device; and

changing a channel at the client device, as disclosed by Hamilton changing channels causes delay in acquiring/ tuning to programming data from a new channel, this is similar to turning the TV on, as the TV begins to tune to/ acquire the channel it was set on. Therefore both these triggers cause similar presentation of advertisement while the desired program is tuned to ¶¶ [12] and [14]).

5.4. Regarding claim 35, Hamilton discloses a method of processing a broadcast application in a client device in a data broadcasting system (Fig. 1A, Abstract), the method comprising the steps of:

Receiving (STB in Fig. 1A), from a server (Headend), an advertisement image file and application information relating to a specific application (advertisements related to a specific channel/ program/application are received at the STB receiver. advertising is extracted from the local drive, or streamed through MPEG transport stream ¶ [15]);

determining if the application information includes advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

extracting the received advertisement image if the application information includes the advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

outputting an advertisement image from the advertisement image file on a screen (¶ [15]); and

executing the specific application after the outputting step (the tuned program is displayed/ the desired application executed).

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (¶ [14]), comprises static images, dynamic applets, animation, and advertisements (¶¶ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (¶ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing "an advertisement image path" for locating and downloading/ extracting of such advertisement from a server.

However, Newell discloses ATSC data broadcasting specification. As reflected in Newell's Abstract (1st page), ATSC specifies the use of MPEG-2 for the packetization and multiplexing of compressed audio/video and data signals. Newell further provides examples of such broadcast services to include enhanced television, hotspots, HTML, and magazines, any of which are notoriously well known to include images/ advertisements. Therefore, Newell discloses inserting/ multiplexing data (image/ advertisement) signals within the stream of programming (audio/ video) signals. (Also see basic goals of ATSC data broadcasting, 2nd page, 1st Col., 2nd paragraph).

Newell further discloses how a path to the appropriate data broadcast is described via Associated Tag Descriptors (ATDs), as shown in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. As demonstrated by Newell the MPEG-2 transport streams are monitored for PIDs, from which SDT, NRT, and PMTs are extracted, tapped, and matched in order to separate programs, broadcast data (advertisements or other applications) and interactive data (advertisements, games, other applications). Taps are pointers to the data. For example, a URL/ Internet address points to a server containing a file (when the file is an advertisement, this specifies a path to

the advertisement, therefore, "**an advertisement image path**") which is then extracted / received by the receiver.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton, with Newell's teachings in order to provide flexibility for locating files/applications anywhere in the network.

5.4.1. Regarding claim 36, Hamilton discloses **wherein the advertisement image file includes one of a still image and a moving image**, (advertisement/signal comprises static images, dynamic applets, animation, and etc.; ¶¶ [16] - [19]).

5.4.2. Regarding claim 38, Hamilton discloses **outputting the advertisement image after receiving a turn on signal or a channel change signal from a user**. As disclosed by Hamilton changing channels causes delay in acquiring/ tuning to programming data from a new channel, this is similar to turning the TV on, as the TV begins to tune to/ acquire the channel it was set on. Therefore both these triggers cause similar presentation of advertisement while the desired program is tuned to (¶¶ [12] and [14]).

5.4.3. Regarding claim 39, Hamilton discloses **outputting an advertisement image** (§ [15]) **for a predetermined time period** (as in § [14], where it is determined to whether to show the advertisement in full while delaying the presentation of the program, or terminate the advertisement as soon as the program is made available).

5.4.3.1. Regarding claim 40, the system of Hamilton and Newell discloses:

- receiving a plurality of data sections of the specific application** (Newell, Page 4, DSM-CC Data Carousel where data is broken into sections and delivered);
- configuring the plurality of data sections as a module** (said sections are reconfigured/ reconstituted into modules for consumption by the receiver/ application) ;
- extracting file objects** (objects/ files are associated with content/ programs/ applications); **and**
- providing the file objects to the application** (See Service Description Framework, pages 4 and 5, where files/data are associated with programs/ applications) **for the predetermined time period** (Hamilton: § [14], where it is determined to whether to show the advertisement in full while delaying the presentation of the

program, or terminate the advertisement as soon as the program is made available).

5.5. Regarding claim 41, Hamilton discloses **a method of processing a broadcast application in a client device in a data broadcasting system** (Fig. 1A, Abstract), **the method comprising the steps of:**

receiving (STB in Fig. 1A), **from a server** (Headend), **an advertisement image file and application information relating to a specific application** (advertisements related to a specific channel/ program/application are received at the STB receiver. advertising is extracted from the local drive, or streamed through MPEG transport stream ¶ [15]);

determining if the application information includes advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

extracting the received advertisement image if the application information includes the advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

outputting an advertisement image from the advertisement image file on a screen (¶ [15]) for a predetermined time period (as in ¶ [14], where it is

determined to whether to show the advertisement in full while delaying the presentation of the program, or terminate the advertisement as soon as the program is made available); and

executing the specific application after the predetermined time period (the tuned program is displayed/ the desired application executed).

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (§ [14]), comprises static images, dynamic applets, animation, and advertisements (§ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (§ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing "an advertisement image path" for locating and downloading/ extracting of such advertisement from a server.

However, Newell discloses ATSC data broadcasting specification. As reflected in Newell's Abstract (1st page), ATSC specifies the use of MPEG-2 for the packetization and multiplexing of compressed audio/video and data signals. Newell further provides examples of such broadcast services to include enhanced television, hotspots, HTML, and magazines, any of which are

notoriously well known to include images/ advertisements. Therefore, Newell discloses inserting/ multiplexing data (image/ advertisement) signals within the stream of programming (audio/ video) signals. (Also see basic goals of ATSC data broadcasting, 2nd page, 1st Col., 2nd paragraph).

Newell further discloses how a path to the appropriate data broadcast is described via Associated Tag Descriptors (ATDs), as shown in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. As demonstrated by Newell the MPEG-2 transport streams are monitored for PIDs, from which SDT, NRT, and PMTs are extracted, tapped ,and matched in order to separate programs, broadcast data (advertisements or other applications) and interactive data (advertisements, games, other applications). Taps are pointers to the data. For example, a URL/ Internet address points to a server containing a file (when the file is an advertisement, this specifies a path to the advertisement, therefore, "an advertisement image path") which is then extracted / received by the receiver.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton, with Newell's teachings in order to provide flexibility for locating files/applications anywhere in the network.

- 5.5.1. Regarding claim 42, Hamilton discloses **wherein the advertisement image file includes one of a still image and a moving image,** (advertisement/signal comprises static images, dynamic applets, animation, and etc.; ¶¶ [16] - [19]).
- 5.5.2. Regarding claim 44, Hamilton discloses **outputting the advertisement image after receiving a turn on signal or a channel change signal from a user.** As disclosed by Hamilton changing channels causes delay in acquiring/ tuning to programming data from a new channel, this is similar to turning the TV on, as the TV begins to tune to/ acquire the channel it was set on. Therefore both these triggers cause similar presentation of advertisement while the desired program is tuned to (¶¶ [12] and [14]).
- 5.5.3. Regarding claim 45, the system of Hamilton and Newell discloses: **receiving a plurality of data sections of the specific application** (Newell, Page 4, DSM-CC Data Carousel where data is broken into sections and delivered);

configuring the plurality of data sections as a module (said sections are reconfigured/ reconstituted into modules for consumption by the receiver/ application) ;

extracting file objects (objects/ files are associated with content/ programs/ applications); and

providing the file objects to the application (See Service Description Framework, pages 4 and 5, where files/data are associated with programs/ applications) **for the predetermined time period** (Hamilton: ¶ [14], where it is determined to whether to show the advertisement in full while delaying the presentation of the program, or terminate the advertisement as soon as the program is made available).

5.6. Regarding claim 46, Hamilton discloses **a client device (STB) in a data broadcasting system for executing a data broadcast application under a client-server environment (Fig. 1A), the data broadcasting system including a network** (a digital TV network using MPEG transport streams) **and a server** (headend/ server transmitting/ serving information) **connected to the client via the network** (as in Fig. 1A), **the client device being configured to: receive (STB in Fig. 1A), from the server (Headend), an advertisement image file and application information relating to a specific application**

(advertisements related to a specific channel/ program/application are received at the STB receiver. advertising is extracted from the local drive, or streamed through MPEG transport stream ¶ [15]);

determine if the application information includes advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

extract the received advertisement image if the application information includes the advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

output an advertisement image from the advertisement image file on a screen (¶ [15]); and

execute the specific application after the advertisement image is output (the tuned program is displayed/ the desired application executed).

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (¶ [14]), comprises static images, dynamic applets, animation, and **advertisements** (¶¶ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (¶ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing "an advertisement image path" for locating and downloading/ extracting of such advertisement from a server.

However, Newell discloses ATSC data broadcasting specification. As reflected in Newell's Abstract (1st page), ATSC specifies the use of MPEG-2 for the packetization and multiplexing of compressed audio/video and data signals. Newell further provides examples of such broadcast services to include enhanced television, hotspots, HTML, and magazines, any of which are notoriously well known to include images/ advertisements. Therefore, Newell discloses inserting/ multiplexing data (image/ advertisement) signals within the stream of programming (audio/ video) signals. (Also see basic goals of ATSC data broadcasting, 2nd page, 1st Col., 2nd paragraph).

Newell further discloses how a path to the appropriate data broadcast is described via Associated Tag Descriptors (ATDs), as shown in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. As demonstrated by Newell the MPEG-2 transport streams are monitored for PIDs, from which SDT, NRT, and PMTs are extracted, tapped, and

matched in order to separate programs, broadcast data (advertisements or other applications) and interactive data (advertisements, games, other applications). Taps are pointers to the data. For example, a URL/ Internet address points to a server containing a file (when the file is an advertisement, this specifies a path to the advertisement, therefore, "**an advertisement image path**") which is then extracted / received by the receiver.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton, with Newell's teachings in order to provide flexibility for locating files/applications anywhere in the network.

5.6.1. Regarding claim 47, Hamilton discloses **wherein the advertisement image file includes one of a still image and a moving image,** (advertisement/signal comprises static images, dynamic applets, animation, and etc.; ¶¶ [16] - [19]).

5.6.2. Regarding claim 49, Hamilton discloses **outputting the advertisement image after receiving a turn on signal or a channel change signal from**

a user. As disclosed by Hamilton changing channels causes delay in acquiring/ tuning to programming data from a new channel, this is similar to turning the TV on, as the TV begins to tune to/ acquire the channel it was set on. Therefore both these triggers cause similar presentation of advertisement while the desired program is tuned to (§§ [12] and [14]).

5.6.3. Regarding claim 50, Hamilton discloses **outputting an advertisement image (§ [15]) for a predetermined time period** (as in § [14], where it is determined to whether to show the advertisement in full while delaying the presentation of the program, or terminate the advertisement as soon as the program is made available).

5.6.4. Regarding claim 51, the system of Hamilton and Newell discloses:

receiving a plurality of data sections of the specific application (Newell, Page 4, DSM-CC Data Carousel where data is broken into sections and delivered);

configuring the plurality of data sections as a module (said sections are reconfigured/ reconstituted into modules for consumption by the receiver/ application) ;

extracting file objects (objects/ files are associated with content/ programs/ applications); **and**

providing the file objects to the application (See Service Description Framework, pages 4 and 5, where files/data are associated with programs/ applications) **for the predetermined time period** (Hamilton: ¶ [14], where it is determined to whether to show the advertisement in full while delaying the presentation of the program, or terminate the advertisement as soon as the program is made available).

5.7. Regarding claim 52, Hamilton discloses **a client device (STB) in a data broadcasting system for executing a data broadcast application under a client-server environment (Fig. 1A), the data broadcasting system including a network** (a digital TV network using MPEG transport streams) **and a server** (headend/ server transmitting/ serving information) **connected to the client via the network** (as in Fig. 1A), **the client device being configured to: receive (STB in Fig. 1A), from the server (Headend), an advertisement image file and application information relating to a specific application** (advertisements related to a specific channel/ program/application are received

at the STB receiver. advertising is extracted from the local drive, or streamed through MPEG transport stream ¶ [15]);

determine if the application information includes advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

extract the received advertisement image if the application information includes the advertisement information (application/ program information are linked with the appropriate advertisement/ signals as in ¶ [19]. The position/ timing of such advertisements are determined as in ¶¶ [38] - [40]);

output an advertisement image from the advertisement image file on a screen (¶ [15]) for a predetermined time period (as in ¶ [14], where it is determined to whether to show the advertisement in full while delaying the presentation of the program, or terminate the advertisement as soon as the program is made available); **and**

execute the specific application after the predetermined time period (the tuned program is displayed/ the desired application executed).

Hamilton discloses that the signal to be displayed, in the event of a trigger such as changing of the channel (¶ [14]), comprises static images, dynamic applets,

animation, and advertisements (¶¶ [16] - [19]). This advertisement may be stored locally and/or delivered by the MPEG-2 transport stream (¶ [15]).

Hamilton computes the timing of the insertion signal (advertisement) as per Fig. 6, and insert an advertisement which is locally stored (known location) therefore he is not explicit in providing "**an advertisement image path**" for locating and downloading/ extracting of such advertisement from a server.

However, Newell discloses ATSC data broadcasting specification. As reflected in Newell's Abstract (1st page), ATSC specifies the use of MPEG-2 for the packetization and multiplexing of compressed audio/video and data signals. Newell further provides examples of such broadcast services to include enhanced television, hotspots, HTML, and magazines, any of which are notoriously well known to include images/ advertisements. Therefore, Newell discloses inserting/ multiplexing data (image/ advertisement) signals within the stream of programming (audio/ video) signals. (Also see basic goals of ATSC data broadcasting, 2nd page, 1st Col., 2nd paragraph).

Newell further discloses how a path to the appropriate data broadcast is described via Associated Tag Descriptors (ATDs), as shown in 4th page, 2nd Col.,

3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. As demonstrated by Newell the MPEG-2 transport streams are monitored for PIDs, from which SDT, NRT, and PMTs are extracted, tapped, and matched in order to separate programs, broadcast data (advertisements or other applications) and interactive data (advertisements, games, other applications). Taps are pointers to the data. For example, a URL/ Internet address points to a server containing a file (when the file is an advertisement, this specifies a path to the advertisement, therefore, "**an advertisement image path**") which is then extracted / received by the receiver.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton, with Newell's teachings in order to provide flexibility for locating files/applications anywhere in the network.

5.7.1. Regarding claim 53, Hamilton discloses **wherein the advertisement image file includes one of a still image and a moving image**, (advertisement/signal comprises static images, dynamic applets, animation, and etc.; ¶¶ [16] - [19]).

5.7.2. Regarding claim 55, Hamilton discloses **outputting the advertisement image after receiving a turn on signal or a channel change signal from a user**. As disclosed by Hamilton changing channels causes delay in acquiring/ tuning to programming data from a new channel, this is similar to turning the TV on, as the TV begins to tune to/ acquire the channel it was set on. Therefore both these triggers cause similar presentation of advertisement while the desired program is tuned to (¶¶ [12] and [14]).

5.7.3. Regarding claim 56, the system of Hamilton and Newell discloses:
receiving a plurality of data sections of the specific application
(Newell, Page 4, DSM-CC Data Carousel where data is broken into sections and delivered);
configuring the plurality of data sections as a module (said sections are reconfigured/ reconstituted into modules for consumption by the receiver/ application) ;
extracting file objects (objects/ files are associated with content/ programs/ applications); **and**

providing the file objects to the application (See Service Description Framework, pages 4 and 5, where files/data are associated with programs/ applications) **for the predetermined time period** (Hamilton: ¶ [14], where it is determined to whether to show the advertisement in full while delaying the presentation of the program, or terminate the advertisement as soon as the program is made available).

6. Claims 37, 43, 48, and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton, in view of Newell, further in view of D. Newell et al., "Overview of The ATSC Data Broadcast Service Specification Version 1.0", Sharp/ Intel Presentation, May 6, 1999 (hereinafter "Newell'99").

6.1. Regarding claim 37, the system of Hamilton and Newell discloses descriptors/ identifiers for locating advertisements and associating the same with programs (Newell: as shown in 4th page, 2nd Col., 3rd paragraph (Service Description Framework), through 6th page, Col. 1, first 3 lines, and Fig. 3. Also descriptor tags in ATSC (pages 32-33, table 15.6) shows the syntax for the Service Data Table (SDT) Byte Structure (also shown in applicant's disclosure, Fig. 2, with addition of description to "service_private_data_byte"). The

"service_private_data_byte" is reserved for recovering/indicating Network addresses such as Network Resource Tables (NRTs, including network addresses, URLs, etc., also shown in Fig. 12.1. ATSC reference was provided in the Office Action of 2/14/2008. The system of Hamilton and Newell is not explicit in that the descriptor includes **an advertisement image name**.

However, Newell'99 discloses that resource descriptors may contain association tags, data stream identifiers, or internet addresses (URL, resource name) of an interactive service (slide 19).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the system of Hamilton and Newell with Newell'99 in order to identify an advertisement (resource) by name for ease and speed of recognition.

6.2. Claim 43 is rejected by the same analysis as claim 37.

6.3. Claim 48 is rejected by the same analysis as claim 37.

6.4. Claim 54 is rejected by the same analysis as claim 37.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES R. MARANDI whose telephone number is (571)270-1843. The examiner can normally be reached on 8:00 AM- 5:00 PM M-F, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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